



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/582,470

06/12/2006

Larry N. Thibos

P00873-US-01

1103

7590

07/24/2008

ICE MILLER

One American Square

Box 82001

Indianapolis, IN 46282-0200

EXAMINER

GREECE, JAMES R

ART UNIT

PAPER NUMBER

2873

MAIL DATE

DELIVERY MODE

07/24/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/582,470	<b>Applicant(s)</b> THIBOS ET AL.	
	<b>Examiner</b> JAMES R. GREECE	<b>Art Unit</b> 2873	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 June 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 June 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/12/2006</u> .   | 6) <input type="checkbox"/> Other: _____                          |

***Detailed Action***

Applicant cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***Status of the Application***

Claims 1-19 are pending in this application

***Drawings***

There are no objections to applicant's drawings at this time.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-8 are rejected under 35 U.S.C. 102(a,e) as being anticipated by Cox et al (USPUB 2004/0054358).

Re claim 1, Cox et al teach for example in figure 1, a. obtaining aberrometric data from a patient by way of an aberrometer; (see at least paragraph 0017) and b. utilizing the aberrometric

Art Unit: 2873

data to perform a equivalent quadratic fitting calculation to obtain at least one clinical refractive prescription for the patient (see at least 0043, second order Zernike).

Re claim 2, Cox et al teach for example in figure 1, comprising the step of adjusting the refractive prescription to maximize the utilization of the patient's depth of field if the aberrometric data suggests that the patient's vision is myopic (see at least paragraph 0120).

Re claim 3, Cox et al teach for example in figure 1, comprising the step of adjusting the ideal optic prescription to maximize the utilization of the patient's depth of field if the aberrometric data suggests that the patient's vision is hyperopic (see at least paragraph 0120).

Re claim 4, Cox et al teach for example in figure 1, wherein the step of utilizing the aberrometric data to perform a equivalent quadratic fitting calculation is performed by a computer processor (see at least the computing station or computer disclosed).

Re claim 5, Cox et al teach for example in figure 4, further comprising the step of evaluating the results and allowing a user to determine whether the prescription should be further optimized (for details see at least figure 4).

Re claim 6, Cox et al teach for example in figure 1, further comprising the step of selecting one of a plurality of optic prescriptions (see at least paragraph 0043).

Re claim 7, Cox et al teach for example in figure 1, a. obtaining patient data; (see at least paragraph 0059 and numeral 410) and b. utilizing the patient data to optimize a clinical refractive prescription (see at least paragraph 0059 and numeral 410).

Re claim 8, Cox et al teach for example in figure 1, a. obtaining environmental data; (for details see at least paragraph 0011) and b. utilizing the patient data to optimize a clinical refractive prescription (see at least paragraph 0059 and numeral 410).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 9-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cox et al (USPUB 2004/0054358) and further in view of Williams et al (USPAT 5,777,719).

Re claim 9, Cox et al teach for example in fig. 1, a. obtaining aberrometric data from a patient by way of an aberrometer; (for details see at least paragraph 0017) b. selecting a metric of image quality; (for details see at least paragraph 0010)c. generating an aberration map from the aberrometric data; (for details see at least paragraph 0010).

But, Cox et al fail to explicitly teach simulating a through focus experiment

However, within the same field of endeavor, Williams et al teach for example in col. 3, lines 13-20, d. simulating a through focus experiment.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Cox et al to include a step of simulating through a focus experiment as taught by Williams et al for the predictable result of a more complete and accurate accounting of the eye's aberrations.

Re claim 10, supra claim 9. Furthermore, Cox et al further teach for example in fig. 1, comprising the step of adjusting the refractive prescription to maximize the utilization of the patient's depth of field if the aberrometric data suggests that the patient's vision is myopic (see at least paragraph 0120).

Re claim 11, supra claim 9. Furthermore, Cox et al further teach for example in fig. 1, comprising the step of adjusting the ideal optic prescription to maximize the utilization of the patient's depth of field if the aberrometric data suggests that the patient's vision is hyperopic (see at least paragraph 0120).

Re claim 12, supra claim 9. Furthermore, Cox et al further teach for example in fig. 1, wherein the step of simulating a through focus experiment is performed by a computer processor (see at least the computing station or computer disclosed).

Re claim 13, supra claim 9. Furthermore, Cox et al further teach for example in fig. 4, further comprising the step of evaluating the results and allowing a user to determine whether the prescription should be further optimized (for details see at least figure 4).

Re claim 14, supra claim 9. Furthermore, Cox et al further teach for example in fig. 1, a. obtaining patient data; (for details see at least paragraph 0059 and numeral 410) and b. utilizing the patient data to optimize a clinical refractive prescription (for details see at least paragraph 0059 and numeral 410).

Re claim 15, supra claim 9. Furthermore, Cox et al further teach for example in fig. 1, a. obtaining environmental data; (see at least paragraph 0011) and b. utilizing the patient data to optimize a clinical refractive prescription (for details see at least paragraph 0059 and numeral 410).

Re claim 16, supra claim 9. Cox et al fails to explicitly teach comprising the additional step of recalculating metrics for each condition in the through focus simulation.

However, within the same field of endeavor, Williams et al (USPAT 5,777,719) teaches for example in Col. 3, 13-20, comprising the additional step of recalculating metrics for each condition in the through focus simulation.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Cox et al to include a step recalculating metrics for each condition in the through focus simulation as taught by Williams et al for the predictable result of a more complete and accurate accounting of the eye's aberrations.

Re claim 17, supra claim 9. Cox et al fails to explicitly teach selecting a prescription that maximizes the chosen metric.

However, within the same field of endeavor, Williams et al (USPAT 5,777,719) teaches for example in Col. 3, 13-20, comprising the additional step of selecting a prescription that maximizes the chosen metric.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Cox et al to include a step selecting a prescription that maximizes the chosen metric as taught by Williams et al for the predictable result of a more complete and accurate accounting of the eye's aberrations.

Re claim 18, supra claim 9. Cox et al fails to explicitly teach the prescription that maximizes the chosen metric is maximized for a specific distance.

However, within the same field of endeavor, Williams et al (USPAT 5,777,719) teaches for example in Col. 3, 13-20, comprising the additional step of the prescription that maximizes the chosen metric is maximized for a specific distance.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Cox et al to include a step of the prescription that maximizes the chosen metric is maximized for a specific distance as taught by Williams et al for the predictable result of a more complete and accurate accounting of the eye's aberrations.

Re claim 19, supra claim 9. Cox et al fails to explicitly teach wherein the prescription that maximizes the chosen metric is maximized to achieve a desired trade-off between maximal quality and depth of focus.

However, within the same field of endeavor, Williams et al (USPAT 5,777,719) teaches for example in Col. 3, 13-20, comprising the additional step wherein the prescription that maximizes the chosen metric is maximized to achieve a desired trade-off between maximal quality and depth of focus.



Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Cox et al to include the prescription that maximizes the chosen metric is maximized to achieve a desired trade-off between maximal quality and depth of focus as taught by Williams et al for the predictable result of a more complete and accurate accounting of the eye's aberrations.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 8 recites the limitation "the patient data" in line 3. There is insufficient antecedent basis for this limitation in the claim.

7. Claim 15 recites the limitation "the patient data" in line 3. There is insufficient antecedent basis for this limitation in the claim.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES R. GREECE whose telephone number is (571)272-3711. The examiner can normally be reached on M-Th 7:30-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached on 571-272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2873

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. R. G./  
James R Greece  
Examiner, Art Unit 2873  
7/17/2008

/Joseph Martinez/  
Patent Examiner, Art Unit 2873